RCRA INTERIM STATUS GROUND-WATER MONITORING INSPECTION REPORT

INSPECTION OF: IT Corporation - Baker Site
Martinez, California
EPA I.D. No. ~~CAD000092619~~ CAD089680250

TYPE OF FACILITY: Surface Impoundment

DATE: August 4, 1982

PARTICIPANTS: A. Weaver/J.M. Sorge (U.S.E.P.A. Contractors)
Stacy Blomquist/Mark Possom (IT Corporation)

3/29/83 reviewed for possible enf follow-up - report does not insufficiently document non compliance - no follow-up at this time Karen S.

OVERVIEW

Facility compliance with federal ground-water monitoring requirements of 40 CFR 265.90-265.94 is reviewed in the following report. In addition, the report contains the inspector's observations and comments regarding the facility. Generally, the facility indicated compliance with the ground-water monitoring provisions contained in the facility permits issued by the California Regional Water Quality Control Board (CRWQCB) under Phase I RCRA authority. RCRA compliance was evaluated by comparing the ground-water monitoring program in operation at the facility to federal requirements (i.e., State program compliance was not evaluated). The facility inspection was completed in accordance with the EPA "Interim Status Ground-Water Monitoring Program Evaluation Guidance Document." Geotechnical and hydrologic site reports are currently under revision as part of the five-year permit renewal processes and were not available for review during the inspection. Geotechnical and hydrologic data was provided verbally by IT.

FACILITY DESCRIPTION

The primary function of IT's Baker facility is the treatment and disposal of liquid hazardous-waste materials. The facility consists of seven surface impoundments for treating and evaporating wastes. In addition, there are two rain water retention right-of-ways traversing the site.

Site topography is essentially level with pond levees rising approximately five to eight feet above the natural surface. Several perched water zones underlie the facility, but no true aquifer exists. The site is situated above various layers of peat and bay mud which account for the perched water layers. Water table fluctuations are attributable to seasonal ground-water intrusion in the area, presumably from the San Francisco Bay. IT Corporation has determined some hydraulic properties of the sub-surface region; however, reports were unavailable during the inspection.

GROUND-WATER MONITORING PROGRAM

A ground-water monitoring program is currently in place at the facility. The program was designed to comply with CRWQCB permit requirements. The monitoring system includes 14 wells surrounding the facility; the wells are screened along their entire length (15-27 feet) with sand and gravel. The wells were installed without protective steel casings and several have been damaged or destroyed as a result. Wells numbered 4 and 6 were collapsed; wells numbered 8 and 10 had damaged standpipes with obvious contamination; and, wells numbered 11 through 14 could not be located during the inspection. The locations of these wells are shown in the attached facility site map.

The ground-water sampling procedures are based on standard methods, but are not delineated in the monitoring plan. The

standard procedures used were developed by the American Public Health Association and include procedures for sample collection, preservation and analysis. Samples are analyzed in-house and formal chain-of-custody or transportation procedures are not documented.

A formal assessment plan has not been prepared, although most of the hydrologic data has been determined for the site. Further information regarding the hydrology of the area and substrata could not be assessed due to the unavailability of the site geology reports during the facility inspection.

COMPLIANCE STATUS

The facility's compliance with specific ground-water monitoring requirements is described below.

Applicability

265.90(a) - A ground-water monitoring system has been installed at the Baker facility in accordance with CRWQCB requirements. Since no aquifer exists at the site, the facility is in compliance with 265.90(a).

Ground-Water Monitoring System

265.91(a)(1) - There are no known aquifers beneath the Baker facility. Therefore, no upgradient well determination has been made at the site. Since no aquifer exists, the facility is in compliance with 265.91(a)(1).

265.91(a)(2) - Since no aquifer exists, no downgradient wells have been defined and the facility is in compliance with 265.91(a)(2).

265.91(c) - As previously mentioned, no protective well casings have been installed and several wells have been contaminated, damaged or destroyed as a result. Well screens are packed with sand and gravel, with annular spaces sealed with bentonite slurry and cement caps. Since several wells showed obvious damage, the facility is not in compliance with 265.91(c).

Sampling and Analysis

265.92(a) - A ground-water sampling and analysis plan has been defined by the CRWQCB as a permit requirement for the facility. The plan is kept at IT's offices off-site and has been followed. The monitoring plan references standard procedures for sample collection, preservation and analysis; however, no specific procedures are documented in the plan. IT conducts sample analysis internally within a State-certified laboratory. Formal sample

shipping and chain-of-custody procedures are not followed. Therefore, the facility does not comply with 265.92(a).

265.92(b)(1) - The program requires the semi-annual analysis for arsenic, cadmium, chromium, lead and pesticides to determine ground-water suitability as drinking water. Therefore, the facility does not comply with 265.92(b)(1).

265.92(b)(2) - Parameters used to assess ground-water quality only include phenols and chloride. Therefore, the facility does not comply with 265.92(b)(2).

265.92(b)(3) - Ground-water contamination is assessed by analyzing for TOC, pH and specific conductance. Since TOH is not included, the facility does not comply with 265.92(b)(3).

265.93(c)(2) - Replicate samples are not presently taken from an upgradient well, nor were they obtained during previous sampling years. However, since the program has been operated for several years, a basis for background ground-water quality determination has been established. Regardless, the facility is not in strict compliance with 265.92(c)(2).

265.92(d)(1) - Chlorides and phenols are monitored annually; other parameters are not monitored. The facility complies with 265.92(d)(1), since the facility-defined ground-water quality parameters are reported annually.

265.92(d)(2) - The facility-defined ground-water contamination parameters are analyzed semi-annually. Therefore, the facility complies with 265.92(d)(2); however, TOH is not included in the facility-defined contamination parameter list.

265.92(e) - Ground-water surface elevations are determined during each quarterly sampling period. However, since the reported water levels are measured from the top of the standpipe, several of which are broken off, the utility of this information is questionable. The facility is in compliance with 265.92(e).

Preparation, Evaluation and Response

265.93(a) - IT has not prepared a formal ground-water quality assessment program for the Baker facility. Some hydraulic properties of the site have been determined, but data were not available during the inspection. The facility is not in compliance with 265.93(a).

265.93(f) - Ground-water elevations are reported for each quarter; permit evaluations are conducted every five years, at which time it is presumed that recorded elevations would be reviewed. No modification of the monitoring system has occurred. The facility is in compliance with 265.93(f).

Record Keeping and Reporting

265.94(a)(1) - Ground-water analysis reports are prepared for the CRWQCB as part of the permit program. Ground-water surface elevations are reported with the ground-water analysis results. The facility is in compliance with 265.94(a)(1).

265.94(a)(2) - The facility provides quarterly ground-water analysis and sampling reports to the CRWQCB as part of the permit requirements. The reports include ground-water concentration parameters, elevations and contamination parameters. The facility is in compliance with 265.94(a)(2).

SUMMARY

The IT Baker facility is currently in compliance with applicable federal Interim Status RCRA requirements, except in the following areas:

265.91 (c) ?

265.92(a) - The monitoring plan does not document field sampling procedures, sample shipment or chain-of-custody procedures.

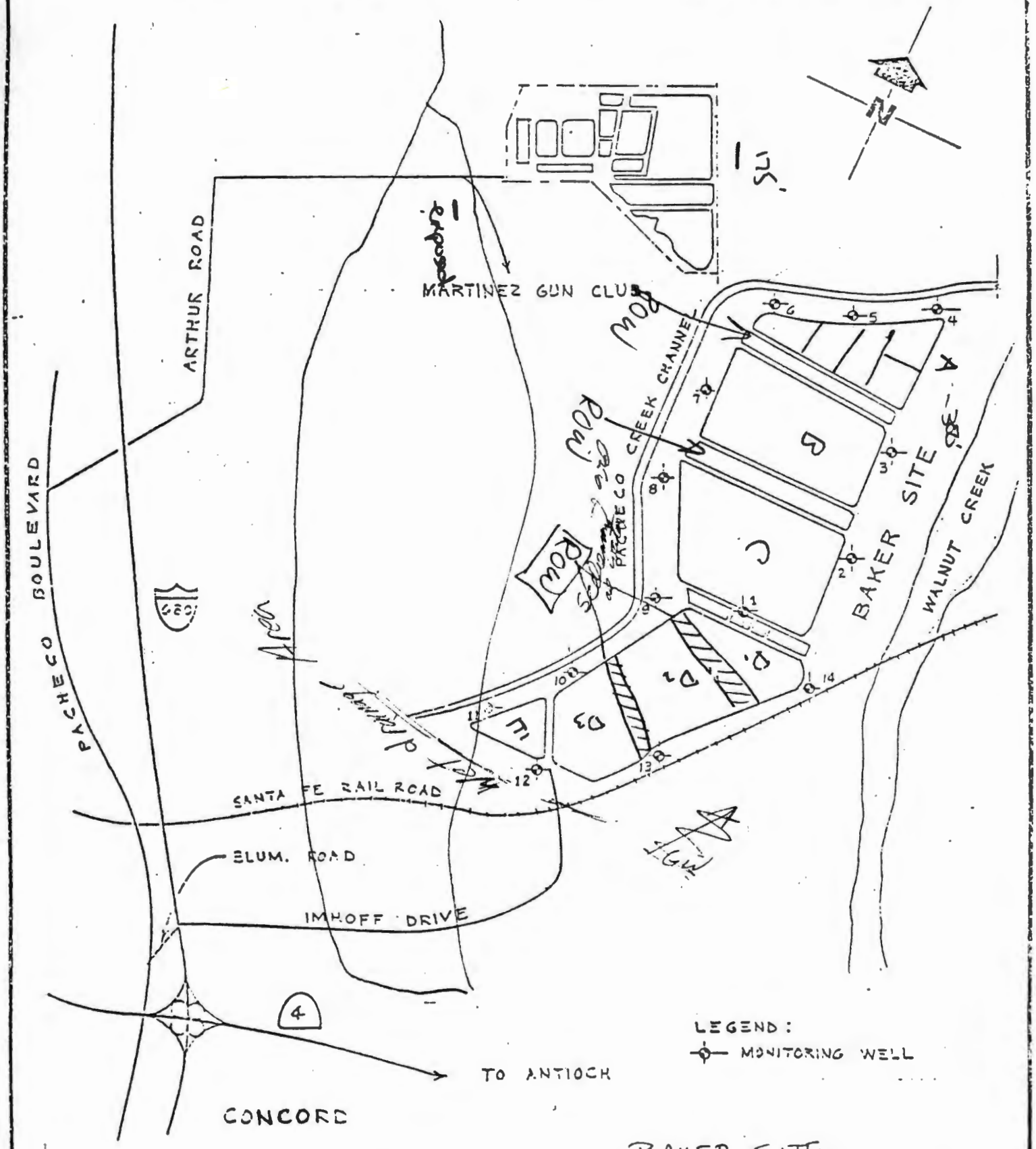
265.92(b)(1) - Only selected drinking-water parameters are included in the ground-water analysis.

265.92(b)(2) - Only selected ground-water quality parameters are included in the ground-water analysis.

265.92(b)(3) - TOH is not included in the ground-water analysis at the facility.

265.92(c)(2) - Replicate samples have not been obtained to establish background ground-water quality at the Baker facility.

265.93(a) - A ground-water assessment plan has not been outlined for the facility, although some hydraulic substrata properties have been determined.



BAKER SITE

LOCATION PLAN OF I.T.E. of CONTRA COSTA COUNTY

SCALE : N. T. S.

SK # 79-013

APPENDIX A-1

FACILITY INSPECTION FORM FOR COMPLIANCE WITH INTERIM STATUS STANDARDS COVERING GROUND-WATER MONITORING

Company Name: IT Corporation ; EPA I.D. Number: CAD089680250

Company Address: 4575 Pacheco Boulevard ; Inspector's Name: J. Sorge,
Martinez, CA 94553 A. Weaver
Baker Site (Aqueous Waste Treatment)

Company Contact/Official: Mark Possum ; Branch/Organization: _____

Title: Environmental Engineer ; Date of Inspection: 3 Aug. 1982

	Yes	No	Unknown	Waive
Type of facility: (check appropriately)				
a) surface impoundment	✓			
b) landfill				
c) land treatment facility				
d) disposal waste pile*				
Ground-Water Monitoring Program				
1. Was the ground-water monitoring program reviewed prior to site visit? If "No",		✓		
a) Was the ground-water program reviewed at the facility prior to site inspection?	✓			
2. Has a ground-water monitoring program (capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility) been implemented? 265.90(a)	✓			

*Listed separate from landfill for convenience of identification.

NOTE: The facility complies with a State Regional Water Pollution Control Board Permit; not specifically RCRA. Also, all geotechnical reports were unavailable for review during inspection. All geotechnical information was provided by IT personnel, verbally.

	Yes	No	Unknown	Waived
3. Has at least one monitoring well been installed in the uppermost aquifer hydraulically upgradient from the limit of the waste management area? 265.91(a)(1)	✓ (no aquifer)			
a) Are ground-water samples from the uppermost aquifer, representative of background ground-water quality and not affected by the facility (as ensured by proper well number, locations and depths?)				
4. Have at least three monitoring wells been installed hydraulically downgradient at the limit of the waste handling or management area? 265.91(a)(2)	✓			
a) Do well number, locations and depths ensure prompt detection of any statistically significant amounts of HW or HW constituents that migrate from the waste management area to the uppermost aquifer?	✓			
5. Have the locations of the waste management areas been verified to conform with information in the ground-water program?	✓			
a) If the facility contains multiple waste management components, is each component adequately monitored?				
6. Do the numbers, locations, and depths of the ground-water monitoring wells agree with the data in the ground-water monitoring system program? If "No", explain discrepancies.		N/A		
7. Well completion details. 265.91(c)				
a) Are wells properly cased?	✓			
b) Are wells screened (perforated) and packed where necessary to enable sampling at appropriate depths?	✓			
c) Are annular spaces properly sealed to prevent contamination of ground-water?	✓			

	Yes	No	Unknown	
8. Has a ground-water sampling and analysis plan been developed? 265.92(a)	✓			
a) Has it been followed?	✓			
b) Is the plan kept at the facility?		✓		
c) Does the plan include procedures and techniques for:				
1) Sample collection?		✓		
2) Sample preservation?		✓		
3) Sample shipment?		✓		
4) Analytical procedures?	✓			
5) Chain of custody control?	✓			
9. Are the required parameters in ground-water samples being tested quarterly for the first year? 265.92(b) and 265.92 (c)(1)		✓		
a) Are the ground-water samples analyzed for the following:				
1) Parameters characterizing the suitability of the ground-water as a drinking water supply? 265.92(b)(1)	✓			(most)
2) Parameters establishing ground-water quality? 265.92(b)(2)	✓			(most)
3) Parameters used as indicators of ground-water contamination? 265.92(b)(3)	✓			(most)
(i) For each indicator parameter are at least four replicate measurements obtained at each upgradient well for each sample obtained during the first year of monitoring? 265.92(c)(2)		✓		
(ii) Are provisions made to calculate the initial background arithmetic mean and variance of the respective parameter concentrations or values obtained from the upgradient well(s) during the first year? 265.92(c)(2)	✓			
b) For facilities which have completed first year ground-water sampling and analysis requirements:				not complete
1) Have samples been obtained and analyzed for the ground-water quality parameters at least annually? 265.92(d)(1)				
2) Have samples been obtained and analyzed for the indicators of ground-water contamination at least semi-annually? 265.92(d)(2)				

	Yes	No	Unknown
c) Were ground-water surface elevations determined at each monitoring well each time a sample was taken? 265.92(e)	✓		
d) Were the ground-water surface elevations evaluated annually to determine whether the monitoring wells are properly placed? 265.93(f)	✓		
e) If it was determined that modification of the number, location or depth of monitoring wells was necessary, was the system brought into compliance with 265.91(a)? 265.93(f)		N/A	
10. Has an outline of a ground-water quality assessment program been prepared? 265.93(a)*		✓	
a) Does it describe a program capable of determining:			
1) Whether hazardous waste or hazardous waste constituents have entered the ground water?			
2) The rate and extent of migration of hazardous waste or hazardous waste constituents in ground water?			
3) Concentrations of hazardous waste or hazardous waste constituents in ground water?			
b) After the first year of monitoring, have at least four replicate measurements of each indicator parameter been obtained for samples taken for each well? 265.93(b)			
1) Were the results compared with the initial background means from the upgradient well(s) determined during the first year?		✓	
(i) Was each well considered individually?			
(ii) Was the Student's t-test used (at the 0.01 level of significance)?			
2) Was a significant increase (or pH decrease as well) found in the:			
(i) Upgradient wells		✓	
(ii) Downgradient wells		✓	
If "Yes", Compliance Checklist A-2 must also be completed.			

*See note Page 2-10

	Yes	No	Unknown
11. Have records been kept of analyses for parameters in 265.92(c) and (d)? 265.94(a)(1)	✓		
12. Have records been kept of ground-water surface elevations taken at the time of sampling for each well? 265.94(a)(1)	✓		
13. Have records been kept of required elevations in 265.93(b)? 265.94(a)(1)	✓		
14. Have the following been submitted to the Regional Administrator 265.94(a)(2) :* (to state)			
a) Initial background concentrations of parameters listed in 265.92(b) within 15 days after completing each quarterly analysis required during the first year?	✓		
b) For each well, have any parameters whose concentrations or values have exceeded the maximum contaminant levels allowed in drinking water supplies been separately identified?	✓		
c) Annual reports including:			
1) Concentrations or values of parameters used as indicators of ground-water contamination for each well along with required evaluations under 265.93(b)?	✓		(for most)
2) Any significant differences from initial background values in up-gradient wells separately identified?	✓		(for most)
3) Results of the evaluation of ground-water surface elevations?	✓		(for most)

*EPA will be proposing (Spring 1982) to replace this reporting requirement with an exception reporting system where reports will be submitted only where maximum contaminant levels or significant changes in the contamination indicators or other parameters are observed. EPA has delayed compliance stage for 14 a) above until August 1, 1982 (Federal Register, February 23, 1982, p.7841-7842) to be coupled with exception reporting in the interim.